

## **REMARKS**

[0001] Applicant respectfully requests entry of the following remarks and reconsideration of the subject application. Applicant respectfully requests entry of the amendments herein. The remarks and amendments should be entered under 37 C.F.R. §1.116 as they place the application in better form for appeal, or for resolution on the merits.

[0002] Applicant respectfully requests reconsideration and allowance of all of the claims of the application. Claims 1-27, 29, and 30 are presently pending. Claims amended herein are: 1, 2, 13, 14, 19, 26, 27, and 29. Claims withdrawn or cancelled herein are: 31 and 32. New claims added herein are: none.

### **Formal Request for an Interview**

[0003] If the Examiner's reply to this communication is anything other than allowance of all pending claims, then I formally request an interview with the Examiner. I encourage the Examiner to call me—the undersigned representative for the Applicant—so that we can discuss this matter so as to resolve any outstanding issues quickly and efficiently over the phone.

[0004] Please contact me or my assistant to schedule a date and time for a telephone interview that is most convenient for both of us. While email works great for us, I welcome your call to either of us as well. Our contact information may be found on the last page of this response.

### **Claim Amendments**

[0005] Without conceding the propriety of the rejections herein and in the interest of expediting prosecution, Applicant amends claims 1, 2, 13, 14, 19, 26, 27, and 29 herein. Applicant amends claims to clarify claimed features. Such amendments are made to expedite prosecution and to more quickly identify allowable subject matter. Such amendments are merely intended to clarify the claimed features, and should not be construed as further limiting what is claimed in response to the cited references.

### **Substantive Matters**

#### **Claim Rejections under §§ 102 and 103**

[0006] The Examiner rejects claims 1-8, 11, 13-14, 16-17, 26-27 and 29-32 under §102. For the reasons set forth below, the Examiner has not shown that the cited references anticipate the rejected claims in their current, amended form.

[0007] In addition, the Examiner rejects claims 9-10, 12, 15, and 18-25 under §103. For the reasons set forth below, the Examiner has not made a prima facie case showing that the rejected claims are obvious.

[0008] Accordingly, Applicant respectfully requests that the §102 and §103 rejections be withdrawn and the case be passed along to issuance.

**[0009]** The Examiner's rejections are based upon the following references alone or in combination:

- **Russell:** *Russell, et al.*, US Patent Publication No. 2004/0039964 (published February 26, 2004);
- **Ernst:** *Ernst, et al.*, US Patent Publication No. 2003/0182308 (Published September 25, 2003); and
- **Albornoz:** *Albornoz, et al.*, US Patent Publication No. 2005/0154978 (Published July 14, 2005)

### **Overview of the Application**

**[0010]** The Application describes a technology for remote communication of objects. Briefly stated, a system and method for securely transferring computer-readable objects across a remote boundary is provided. The method decomposes any type of object into a hierarchy of sub-components based on a list of known object types, the list having been negotiated with a remote entity. Each sub-component either corresponds to a known object type or an unknown object type. The unknown object types may be decomposed further into known object types at another level in the hierarchy. The known objects in the hierarchy are serialized into a package that is transmitted to the remote entity. The remote entity reconstructs the hierarchy. For any of the known object types, the remote entity instantiates an object of the known object type and populates the object with information transmitted in the package. The decomposition may be limited by specifying a level for the hierarchy, specifying a number that limits

the known objects that are serialized, or specifying the properties within the object to serialize.

### **Cited References**

[0011] The Examiner cites Russell as the primary reference in the anticipation- and obviousness-based rejections. The Examiner cites Ernst and Alborno as secondary references in the obviousness-based rejections.

#### **Russell**

[0012] Russell describes a technology for programmatically serializing complex objects (such as JavaBeans.TM.). In contrast to prior art techniques, a manually-specified data type mapping specification is not required as input to the serialization process. Instead, the present invention programmatically generates this type mapping, responsive to encountering run-time exceptions during the serialization process. The serialization process is therefore "self-healing". This approach is especially advantageous when serializing complex objects that may include complex data types and/or embedded objects. The programmatically-generated type mapping information is preferably used to generate a serialized version of the complex object, and can also be used during deserialization. In addition to improving serialization techniques, this type mapping information facilitates dynamic integration and transformation of data between heterogeneous formats.

Ernst

**[0013]** Ernst describes a technology for storing and accessing data in a content management system which allows content schema evolution while maintaining operation based on already stored content data. A data processing apparatus for storing and accessing data in a content management system comprises a content object generation arrangement for generating content objects to store content data, wherein a content object comprises a plurality of property-value bindings, a content object storing arrangement for storing generated content objects, a content schema generation arrangement for generating an object-oriented content schema to model content data, a content schema storing arrangement for storing the generated content schema, and a content object accessing arrangement to access stored content objects by way of the stored content schema.

Albornoz

**[0014]** Albornoz is a book on the topic of allowing efficient creation of data structures that correspond to data formats specified by content models specified within XML schemas. The data in these data structures is produced as XML documents that conform to those XML schemas. Programs written in dynamic programming languages, such as JavaScript, create and instantiate object classes that conform to one or more pre-existing XML schemas. These object classes provide an application program interface (API) for application programs to manipulate data via exposed data structures and methods. Application programs are able to access exposed data structures through conventional programming

methods. After the application program has completed manipulation of data within the instantiated data classes, the data is then produced as an XML document that conforms to the XML schema.

## **Anticipation Rejections**

[0015] Applicant submits that the anticipation rejections are not valid because, for each rejected claim, no single reference discloses each and every feature of that rejected claim.<sup>1</sup> Furthermore, the features disclosed in the single reference are not arranged in the manner recited by each rejected claim.<sup>2</sup>

### **Based upon Russell**

[0016] The Examiner rejects claims 1-8, 11, 13-14, 16-17, 26-27 and 29-32 under 35 U.S.C. §102(e) as being anticipated by Russell. Applicant respectfully traverses this rejection. Based on the reasons given below, Applicant asks the Examiner to withdraw the rejection of these claims.

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<sup>1</sup> "A claim is anticipated only if each and every element as set forth in the claim is found, either expressly or inherently described, in a single prior art reference." *Verdegaal Bros. v. Union Oil Co. of California*, 814 F.2d 628, 631, 2 USPQ2d 1051, 1053 (Fed. Cir. 1987); also see MPEP §2131.

<sup>2</sup> See *In re Bond*, 910 F.2d 831, 15 USPQ2d 1566 (Fed. Cir. 1990).

Independent, Amended Claims 1 and 26

[0017] Applicant submits that Russell does not anticipate these claims because it does not show or disclose at least the following features as recited in these claims (with emphasis added):

- ***"negotiating with a remote entity to determine which object types are known by the remote entity in order to determine a list of known objects;"***
- ***"after the negotiating, decomposing an object of the computer-readable objects into multiple sub-components, including *dividing the multiple sub-components into a hierarchy based upon the negotiated list of known object types, the known object types being a type known by the remote entity;*"***

[0018] The negotiating and the dividing recited by amended, independent claims 1 and 26 are similar to features recited in claims 29 and 31. In rejecting claims 29 and 31, the Examiner cited paragraphs 74, 77, and 80 of Russell. Those passages describe a method of dynamically generating a mapping while serializing an object, such as an application program. The serialization proceeds until a complex object is encountered, at which point an error occurs. The error is then analyzed to determine the type of the complex object and add the type to a dynamically generated mapping. The next time that the complex object is encountered, it will be recognized through the mapping and serialized without generation of an error. Thus, in Russell, the list of known types is generated while decomposing and serializing based on cumulative learning occurring during

those processes. No reference is made as to what is "known" to a remote entity, nor does any negotiation with a remote entity occur.

**[0019]** Thus, Russell does not teach, in as complete of detail as is claimed, negotiating a list of known types with a remote entity. No remote entity is even mentioned. And even ignoring this absence of a remote entity, the list of known types taught by Russell is dynamically generated based on errors, not negotiated. Accordingly, Russell discloses neither a remote entity nor a negotiated list of known object types.

**[0020]** Additionally, Russell fails to teach the decomposing of an object, based on a list of known types, after that list has been negotiated. Instead, Russell teaches serializing of an object based on a mapping that is dynamically generated while serializing.

**[0021]** An example may be helpful in clarifying the differences between Russell and what is claimed in claims 1 and 26. Russell mentions a few complex objects, "AccountTransaction" and "Vector" being two of these. In Russell, the first time each is encountered, an error occurs and the type is added to the mapping. The next time each is encountered, no error occurs. Thus, the complex objects are serialized differently when encountered a second time. In contrast, what is claimed in claims 1 and 26 negotiates known object types in advance. The serializing of the object will then be handled the same each time it occurs. It will either be handled as a known object each time, or an unknown object each time.



**[0022]** This difference is in part explained by the fact that Russell seems to rely on the well known distinction in the art between simple types (strings, integers, etc.) and complex types (classes, structs, etc.). In what is claimed in claims 1 and 26, no distinction is made between simple and complex types, both may be known or unknown. Thus, while negotiating is required in claim 1, no negotiating between a sender and recipient is necessary in Russell. In fact, by relying on the well known distinction between simple and complex types, Russell arguably teaches away from what is claimed in claims 1 and 26.

**[0023]** Consequently, Russell does not disclose all of the features and features of this claim. Accordingly, Applicant asks the Examiner to withdraw the rejection of this claim.

*Dependent Claims 2-8, 11, 13-14, 16-17, 27, and 29-32*

**[0024]** Applicant has cancelled claims 31 and 32, obviating their rejections.

**[0025]** Claims 2-8, 11, 13-14, 16-17, 27, 29, and 30 ultimately depend upon independent claims 1 and 26, respectively. As discussed above, claims 1 and 26 are allowable. It is axiomatic that any dependent claim which depends from an allowable base claim is also allowable. Additionally, some or all of these claims may also be allowable for additional independent reasons.

## **Obviousness Rejections**

### **Lack of *Prima Facie* Case of Obviousness (MPEP § 2142)**

[0026] Applicant disagrees with the Examiner's obviousness rejections. Arguments presented herein point to various aspects of the record to demonstrate that all of the criteria set forth for making a prima facie case have not been met.

### **Based upon Russell and Ernst**

[0027] The Examiner rejects claims 9, 10 and 12 under 35 U.S.C. §103(a) as being unpatentable over Russell in view of Ernst. Applicant respectfully traverses the rejection of these claims and asks the Examiner to withdraw the rejection of these claims.

[0028] Ernst is only cited as teaching the additional recitations of claims 9, 10, and 12, and does not cure the deficiencies of Russell with regard to amended, independent claim 1 discussed above. Thus, claim 1 remains patentable even when Ernst is combined with Russell. Claims 9, 10, and 12 ultimately depend upon claim 1. It is axiomatic that any dependent claim which depends from an allowable base claim is also allowable. Thus, at least because of their dependence on claim 1, claims 9, 10, and 12 patentable over Russell and Ernst. Additionally, some or all of these claims may also be allowable for additional independent reasons.

### **Based upon Russell and Alborno**

**[0029]** The Examiner rejects claims 15 and 18-25 under 35 U.S.C. §103(a) as being unpatentable over Russell in view of Alborno. Applicant respectfully traverses the rejection of these claims and asks the Examiner to withdraw the rejection of these claims.

**[0030]** In Applicant's prior response, Applicant included a 131 affidavit to remove Alborno as a reference. In response, the Examiner has made no mention of the affidavit and continues to treat Alborno as a reference. Applicant respectfully requests the Examiner to consider the affidavit and, if some defect in it be found, inform the Applicant of the defect so that the Applicant may correct the defect.

**[0031]** But regardless of the affidavit, Alborno is only cited as teaching the additional recitations of claims 15 and 18, and does not cure the deficiencies of Russell with regard to amended, independent claim 1 discussed above. Thus, claim 1 remains patentable even when Alborno is combined with Russell. Claims 15 and 18 ultimately depend upon claim 1. It is axiomatic that any dependent claim which depends from an allowable base claim is also allowable. Thus, at least because of their dependence on claim 1, claims 15 and 18 are patentable over Russell and Alborno. Additionally, some or all of these claims may also be allowable for additional independent reasons.

**[0032]** Further, independent claim 19 includes recitations similar to those of claim 1, and makes specific reference to "the list having been negotiated with the remote entity before the serializing of the package on the remote entity." As

mentioned above, Russell does not teach or suggest a remote entity or negotiation of a list prior to serializing. And Albornoz is only cited as teaching the populating of "at least one property of an object with information obtained from within the serialized package." Thus, the combination of Russell and Albornoz fails to teach or suggest the features of independent, amended claim 19.

**[0033]** Claims 20-25 ultimately depend upon claim 19. It is axiomatic that any dependent claim which depends from an allowable base claim is also allowable. Thus, at least because of their dependence on claim 19, claims 20-25 are patentable over Russell and Albornoz. Additionally, some or all of these claims may also be allowable for additional independent reasons.

## **Conclusion**

[0034] All pending claims are in condition for allowance. Applicant respectfully requests reconsideration and prompt issuance of the application. If any issues remain that prevent issuance of this application, the **Examiner is urged to contact me before issuing a subsequent Action.** Please call or email me or my assistant at your convenience.

Respectfully Submitted,

Lee & Hayes, PLLC  
Representatives for Applicant

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